Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (original) A radio transmission power control circuit comprising:

a radio frequency (rf) downconverter that produces a downconverter output having a frequency equal to the frequency difference between a first downconverter input based on a transmitted signal of a radio transmitter and a second downconverter input based on a local oscillator signal;

a receiver baseband circuit that processes the downconverter output to produce a power signal representative of the transmitted signal; and

a feedback control circuit that produces a transmitter gain control signal to control transmitted signal power so as to minimize the difference between the power signal and a power reference signal.

2. (original) A circuit according to claim 1, wherein the radio transmitter is part of a half-duplex radio transceiver also having a receiver circuit such that the receiver baseband circuit is used by the receiver circuit when the radio transmitter is inactive, and wherein the local oscillator signal is used by the radio transmitter such that the transmitted signal has a frequency determined by the local oscillator signal.

3. (original) A circuit according to claim 1, further comprising:

an analog-to-digital converter that converts the power signal to a representative digital power signal; and

wherein the feedback control circuit produces the transmitter gain control signal so as to minimize the difference between the digital power signal and the power reference signal.

4. (original) A circuit according to claim 1, wherein the first downconverter input is developed by a directional coupler that senses the transmitted signal.

5. (original) A circuit according to claim 1, wherein the radio transmitter is part of a wireless local area network transceiver.

6. (original) A circuit according to claim 1, wherein the radio transmitter is part of a time division duplex system.

7. (original) A method of controlling radio transmission power, the method comprising:

producing with a radio frequency (rf) downconverter a downconverter output having a frequency equal to the frequency difference between a first downconverter input based on a transmitted signal of a radio transmitter and a second downconverter input based on a local oscillator signal;

processing the downconverter output with a receiver baseband circuit to produce a power signal representative of the transmitted signal; and

producing a transmitter gain control signal to control transmitted signal power so as to minimize the difference between the power signal and a power reference signal.

8. (original) A method according to claim 7, wherein the radio transmitter is part of a half-duplex radio transceiver also having a receiver circuit such that the receiver baseband circuit is used by the receiver circuit when the radio transmitter is inactive, and wherein the local oscillator signal is used by the radio transmitter such that the transmitted signal has a frequency determined by the local oscillator signal.

9. (original) A method according to claim 7, further comprising:

converting the power signal to a representative digital power signal; and

wherein the transmitter gain control signal is produced so as to minimize the difference between the digital power signal and the power reference signal.

10. (original) A method according to claim 7, wherein the first downconverter input is developed by a directional coupler that senses the transmitted signal.

11. (original) A method according to claim 7, wherein the radio transmitter is part of a wireless local area network transceiver.

12. (original) A method according to claim 7, wherein the radio transmitter is part of a time division duplex system.

13. (new) A radio transmission power control circuit comprising:

a radio frequency (rf) quadrature downconverter that produces a quadrature downconverter output having a frequency equal to the frequency difference between a first quadrature downconverter input based on a transmitted signal of a radio transmitter and a second quadrature downconverter input based on a local oscillator signal;

a receiver baseband circuit that processes the quadrature downconverter output to produce a power signal representative of the transmitted signal; and

a feedback control circuit that produces a transmitter gain control signal to control transmitted signal power so as to minimize the difference between the power signal and a power reference signal.

14. (new) A circuit according to claim 13, wherein the radio transmitter is part of a half-duplex radio transceiver also having a receiver circuit such that the receiver baseband circuit is used by the receiver circuit when the radio transmitter is inactive, and wherein the local oscillator signal is used by the radio transmitter such that the transmitted signal has a frequency determined by the local oscillator signal.

15. (new) A circuit according to claim 13, further comprising:

an analog-to-digital converter that converts the power signal to a representative digital power signal; and

wherein the feedback control circuit produces the transmitter gain control signal so as to minimize the difference between the digital power signal and the power reference signal.

16. (new) A circuit according to claim 13, wherein the first quadrature downconverter input is developed by a directional coupler that senses the transmitted signal.

17. (new) A circuit according to claim 13, wherein the radio transmitter is part of a wireless local area network transceiver.

18. (new) A circuit according to claim 13, wherein the radio transmitter is part of a time division duplex system.

19. (new) A method of controlling radio transmission power, the method comprising:

producing with a radio frequency (rf) quadrature downconverter a quadrature downconverter output having a frequency equal to the frequency difference between a first quadrature downconverter input based on a transmitted signal of a radio transmitter and a second quadrature downconverter input based on a local oscillator signal;

processing the quadrature downconverter output with a receiver baseband circuit to produce a power signal representative of the transmitted signal; and

producing a transmitter gain control signal to control transmitted signal power so as to minimize the difference between the power signal and a power reference signal.

20. (new) A method according to claim 19, wherein the radio transmitter is part of a half-duplex radio transceiver also having a receiver circuit such that the receiver baseband circuit is used by the receiver circuit when the radio transmitter is inactive, and wherein the local oscillator signal is used by the radio transmitter such that the transmitted signal has a frequency determined by the local oscillator signal.

21. (new) A method according to claim 19, further comprising:

converting the power signal to a representative digital power signal; and

wherein the transmitter gain control signal is produced so as to minimize the difference between the digital power signal and the power reference signal.

22. (new) A method according to claim 19, wherein the first quadrature downconverter input is developed by a directional coupler that senses the transmitted signal.

23. (new) A method according to claim 19, wherein the radio transmitter is part of a wireless local area network transceiver.

24. (new) A method according to claim 19, wherein the radio transmitter is part of a time division duplex system.